

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED
PROJECT 0009-171
BROOKINGS AND HAMLIN
COUNTIES
Replace and Repair Fabric Covers
on Hoop Buildings

PCN's i6a7 and i6a8

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	0009-171	1	5

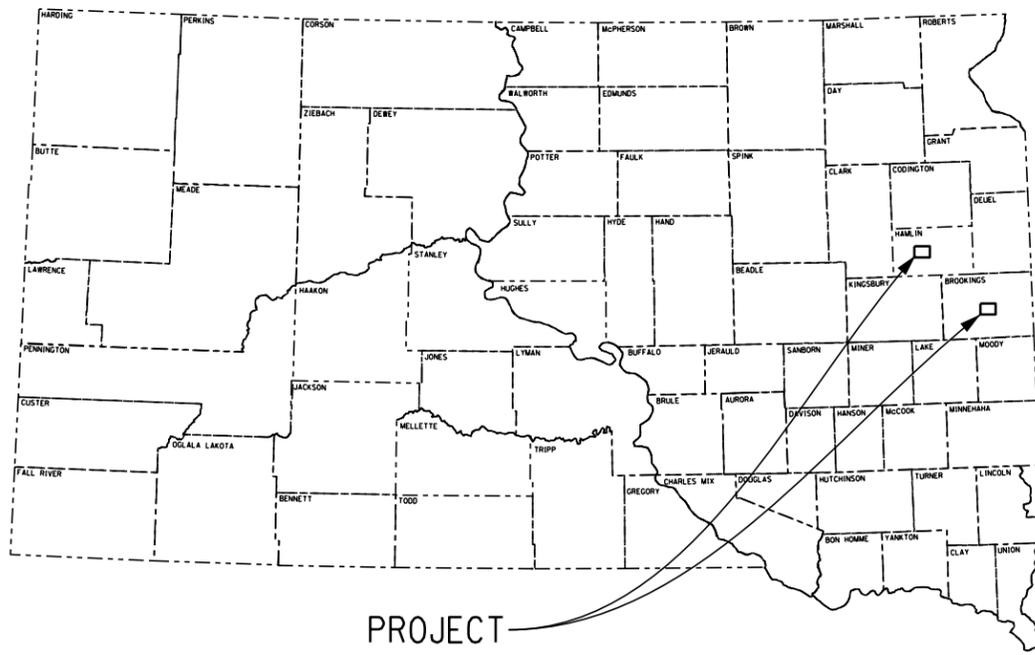
Plotting Date: 01/12/2021

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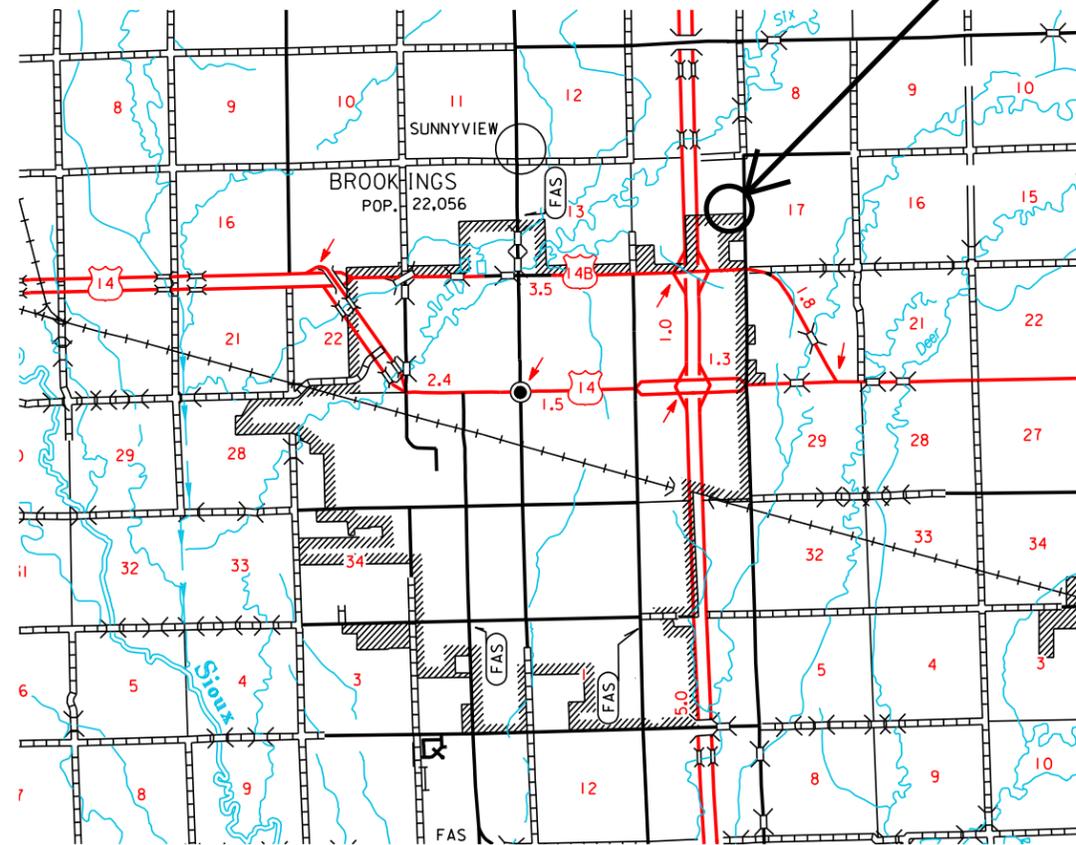
Sheet 1	Title Sheet
Sheet 2	General Notes
Sheets 3 - 5	Brookings Details



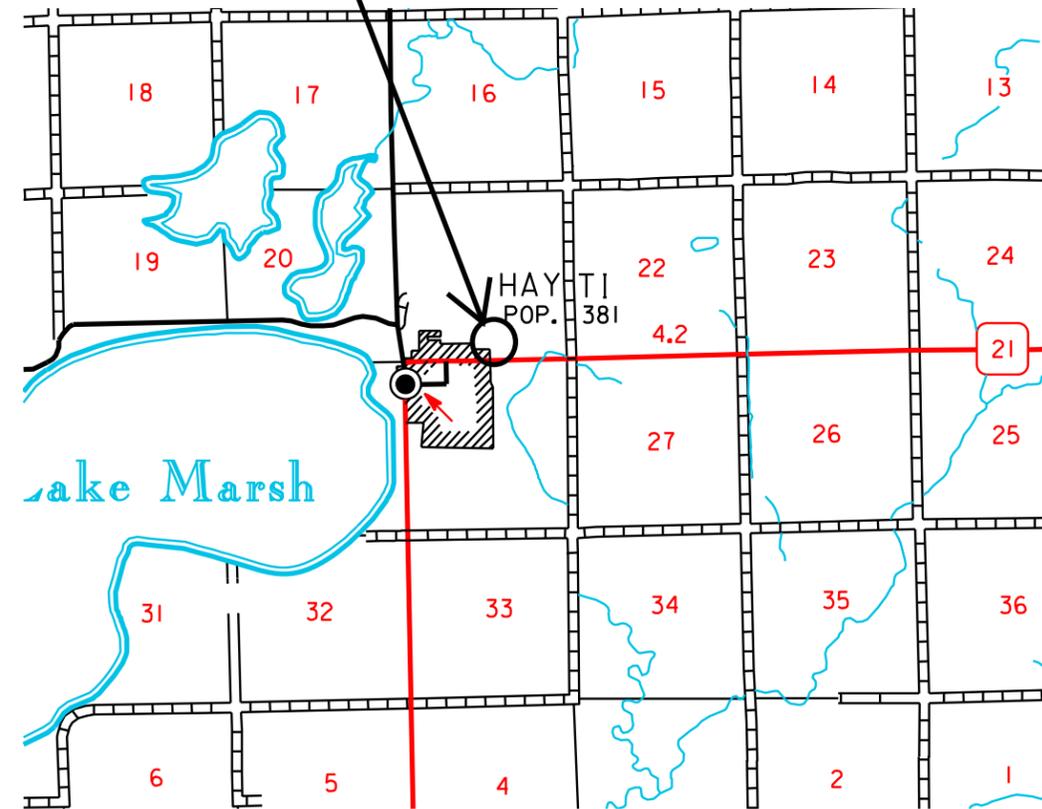
PLOT SCALE - 1:8061.28



PROJECT BROOKINGS MAINTENANCE SHOP PCN i6a7



HAYTI MAINTENANCE SHOP PCN i6a8



STORM WATER PERMIT
None Required

PLOTTED FROM - IRMAINT16

PLOT NAME - 1

FILE - ... \BRK-HAYTI TITLE SHEET.DGN

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	0009-171	2	5
Printing Date: 21-Jan-21		Revised by:	Date:

SPECIFICATIONS

Standard Specifications for Roads and Bridges, 2015 Edition and Required Provisions, Supplemental Specifications and/or Special Provisions as included in the Proposal.

SCOPE OF PROJECT

The work required by this contract includes but is not limited to:

Replacing fabric membrane cover and endwall on the 72' x 100' salt shed (Winkler Canvas) at the Brookings DOT Maintenance Yard, 2131 34th Avenue, Brookings, South Dakota. It is anticipated that the existing tensioning hardware will be used by the Contractor to tension the new cover and endwall.

Repair the endwall and main membrane connection, and retension the fabric membrane cover and endwall on the 62' x 100' salt shed at the Hayti DOT Maintenance Yard, 45058 SD Highway 21 in Hayti, South Dakota. It is anticipated that the existing tensioning hardware will be used by the Contractor to tension the existing cover and endwall.

The Contractor is encouraged to visit both sites prior to bidding to be familiar with the work involved.

PERMITS AND LICENSES

The Contractor shall obtain all necessary State, County and/or City Permits and/or Licenses in accordance with Section 7.2 of the Standard Specifications.

GENERAL CONSTRUCTION NOTES

The Contractor shall notify the Area Engineer three weeks prior to starting work.

Storage areas for materials will be provided within close proximity to the building location. Exact location will be discussed in greater detail at the preconstruction meeting. The Contractor must keep the storage area in a neat and tidy condition.

The work site shall be kept in a neat, safe, and orderly condition at all times. Upon completion of the work, all items that are the property of the Contractor shall be removed. The Contractor shall provide his own waste disposal site.

Once work starts on this project, work shall proceed in a continuous manner until the project is complete.

The manufacturer of the fabric cover and endwall shall have a minimum of 5 years experience in the installation of fabric covers in excess of 60 foot clear span.

The installation of the fabric cover and endwall shall be by the manufacturer or manufacturer certified installation crews. The installation Contractor shall provide reference of at least 5 fabric covers installed in the last 3 years with the Contractors bid.

FABRIC COVER

Fabric Membrane Cover shall form a continuous uninterrupted weather tight shell over the steel framework. In order to provide for a good finished appearance and to insure weather tightness, the fabric cover shall be assembled and tensioned in a manner to eliminate wrinkles in hot and cold temperatures. The gable wall fabric cover cladding shall be manufactured and connected in one piece to the adjacent end wall and roof cladding. Fabric cover shall be coated to provide ultraviolet protection, water proofing and scuff resistance. Fabric cover shall be UV stabilized.

Fabric cover shall be white in color on the outside and bright white in color on the inside of the building.

Fabric cover shall be covered by a 15 year manufacturer's warranty and have a 20 to 25 year life expectancy. A copy of the 15 year manufacturer's warranty shall be submitted with the Contractors bid.

Fabric cover shall be a minimum unit weight of 12.0 oz per square yard.

One end of the building shall be enclosed with the same fabric as used for the top cover of the building with the other end of the building being open.

The replacement end wall fabric covering shall include the installation of wind pressure relief panels (vents). A minimum of 2 vents shall be installed with each vent having a surface area of no less than 9 square feet. The vents required in the building shall be galvanized metal or aluminum.

The Fabric Cover shall be re-tensioned by the Contractor approximately one month after the initial installation.

The Contractor shall provide all materials and methods necessary to fully tension and seal the fabric cover material around the structure perimeter below the main tensioning system. This seal shall provide a neat and finished appearance and eliminate any loose fabric cover cladding that could otherwise be damaged by flapping or abrasion. When a fabric cover base skirt is required, this shall be supplied and attached at the base perimeter to allow a reasonable seal against air and water intrusion.

The Fabric Cover shall meet the following minimum specifications:

Grab Tensile Strength	340 lbs (ASTM D-5304)
Strip Tensile Strength	250 lbs (ASTM D-5305)
Tongue Shear Strength	105 lbs (ASTM D-2261)
Trapezoidal Tear	85 lbs (ASTM D 4533)
Mullen Burst	675 psi (ASTM D-3786)
Cold Crack Resistance	-60 deg C (ASTM D-2136)
Resistance to UV & Weathering	90% retention after 2000 hr. (ASTM G53)

PAYMENT

All costs to furnish, install, and tension the new fabric membrane cover and endwall at the Brookings DOT Salt Shed shall be paid for at the contract unit price per each for BUILDING 1, GENERAL.

All costs to repair and retension the fabric membrane cover and endwall at the Hayti DOT Salt Shed shall be paid for at the contract unit price per each for BUILDING 2, GENERAL.

REQUIRED SUBMITTALS WITH BID

The following items shall be submitted with the bidding documents:

1. A copy of the 15 year manufacturer's warranty for the fabric membrane cover.
2. Reference of at least 5 steel frame and fabric membrane covered buildings built in the last 3 years.

COMPLETION DATE

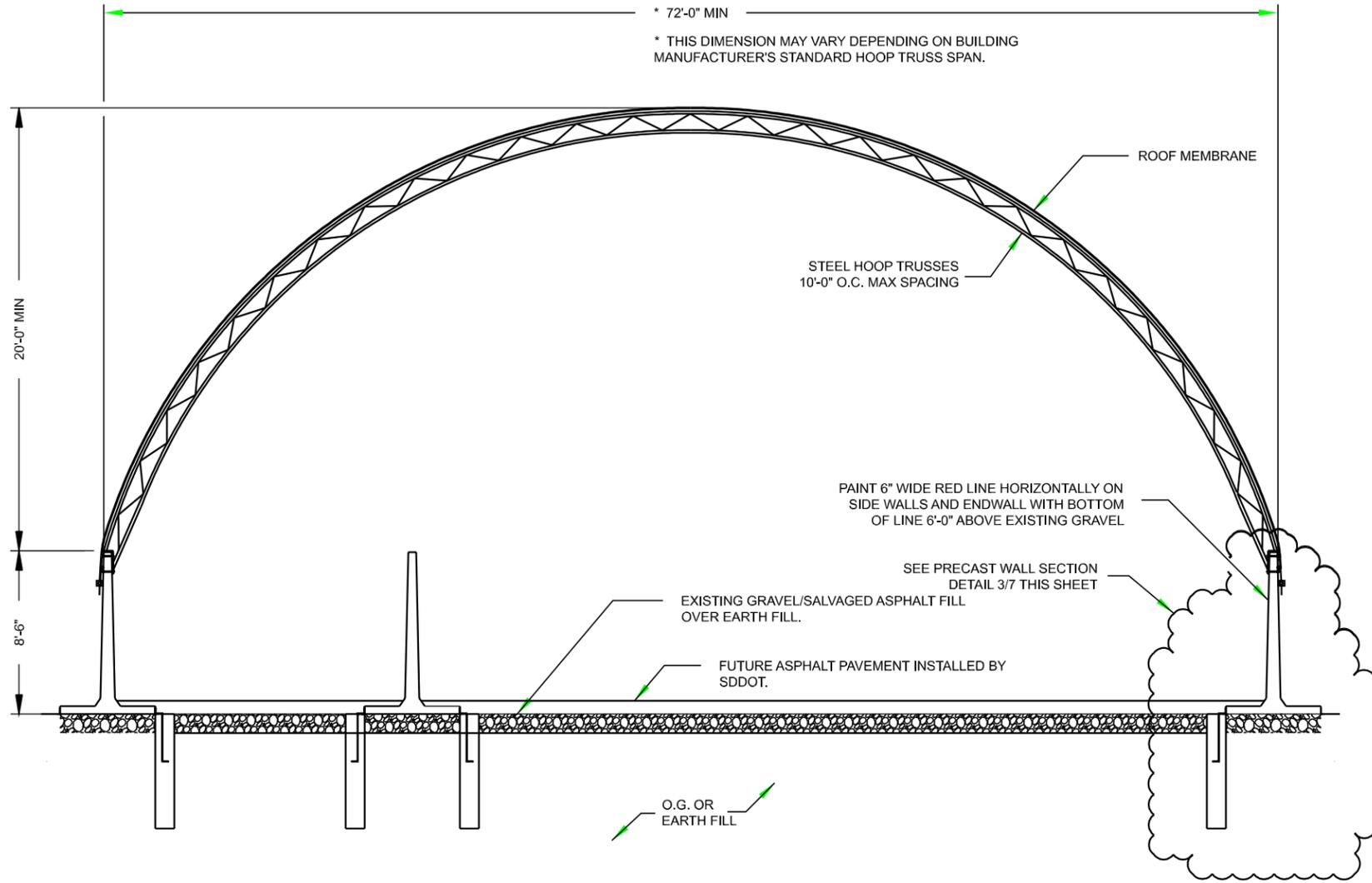
The Completion Date for this project is June 30, 2021. Please refer to Section 8.8 of the Standard Specifications for liquidated damages for failure to meet a completion date.

ORIGINAL CONSTRUCTION PLANS

Brookings

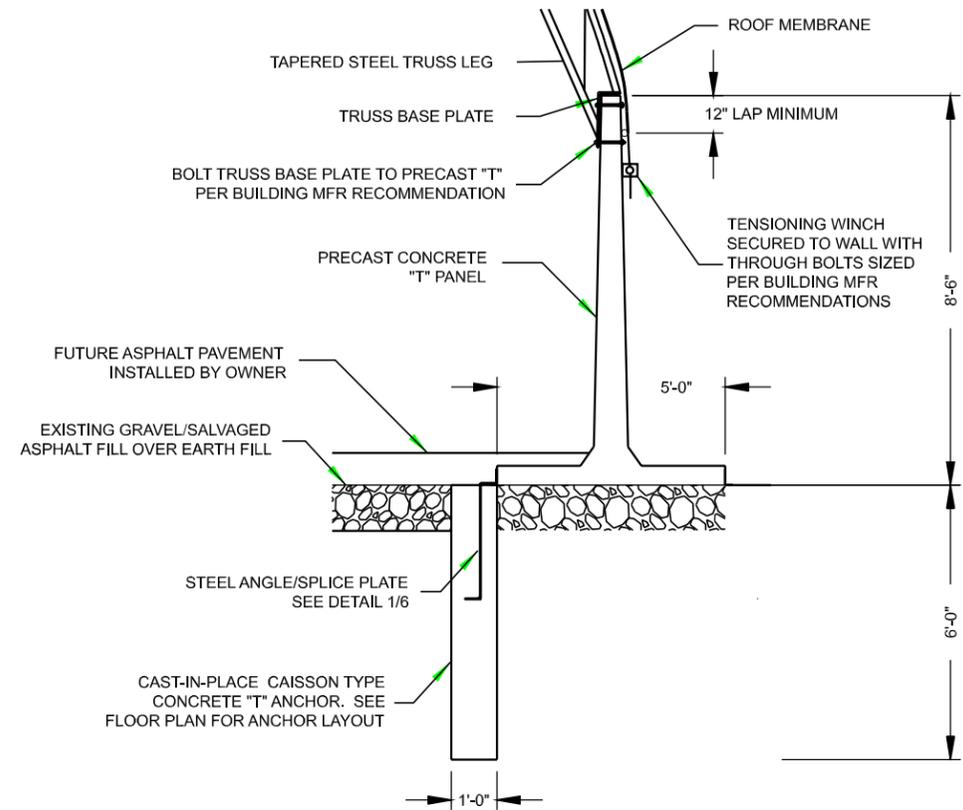
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	0009-171	3	5

Pre-Cast



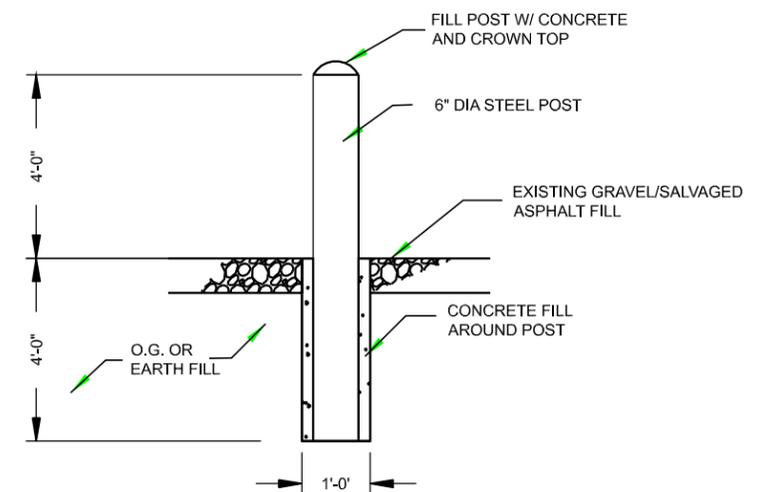
BUILDING SECTION

SCALE : None



PRECAST WALL SECTION

SCALE : 1/4" = 1'-0"



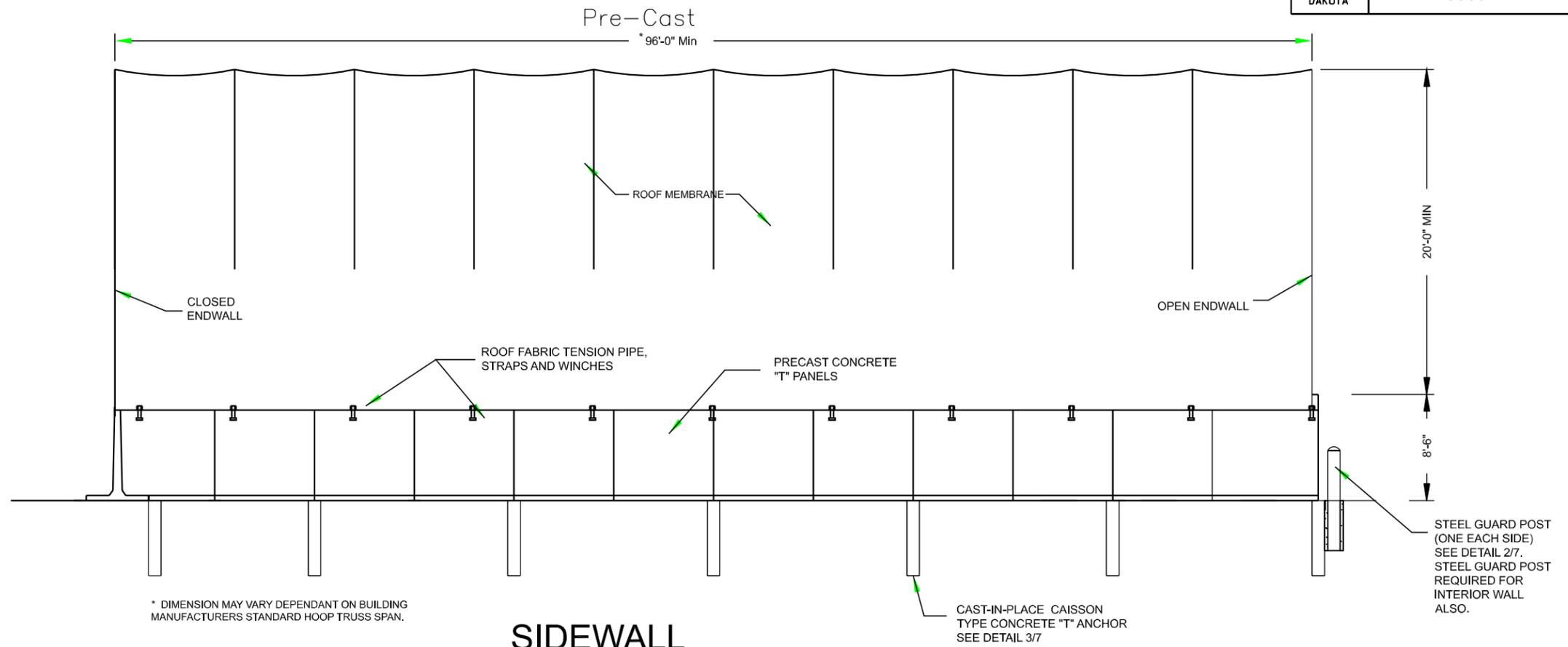
STEEL GUARD POST DETAIL

SCALE: 1/4" = 1'-0"



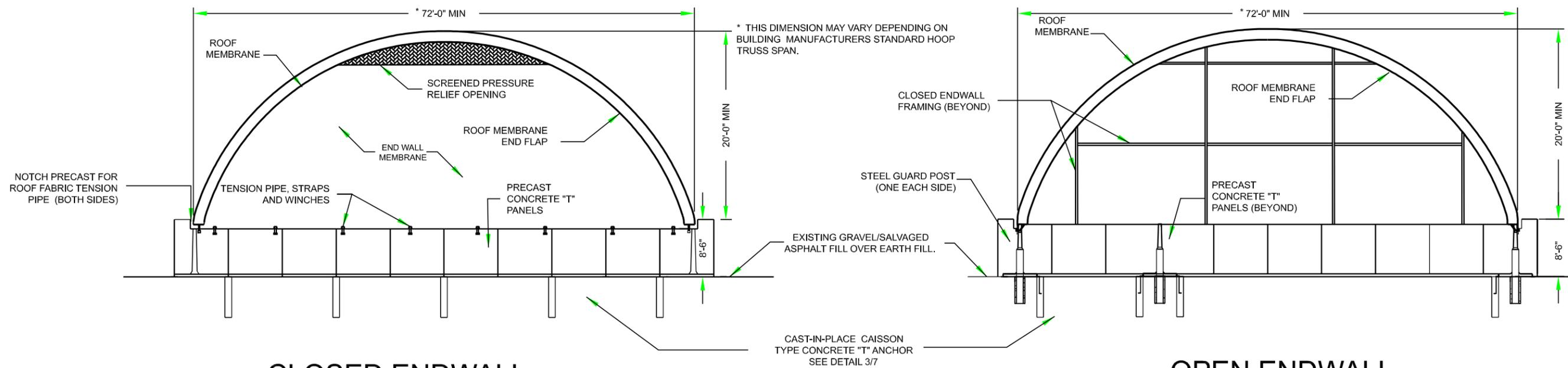
ORIGINAL CONSTRUCTION PLANS

Brookings



SIDEWALL

SCALE: 3/32" = 1'-0"



CLOSED ENDWALL

OPEN ENDWALL

SCALE: 1/16" = 1'-0"

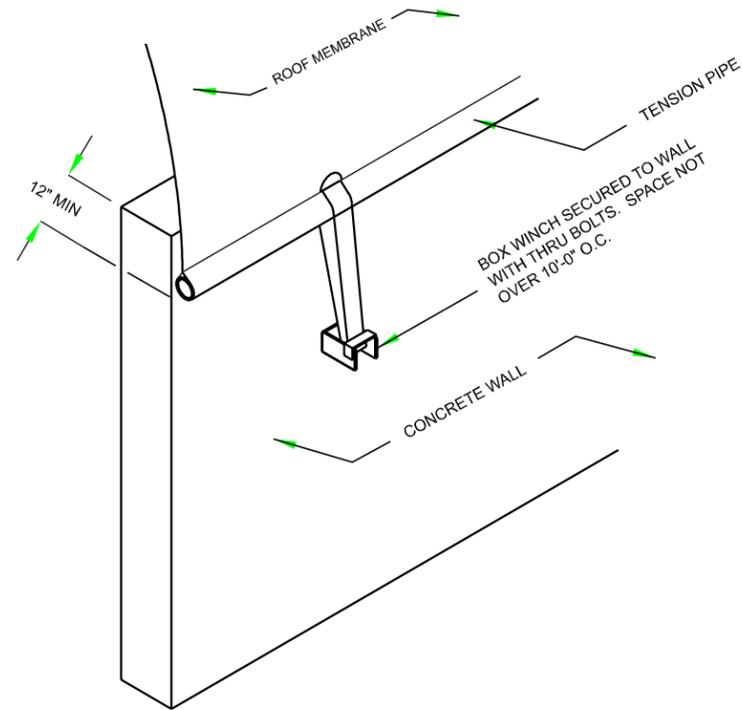
SCALE: 1/16" = 1'-0"

BUILDING ELEVATION

ORIGINAL CONSTRUCTION PLANS

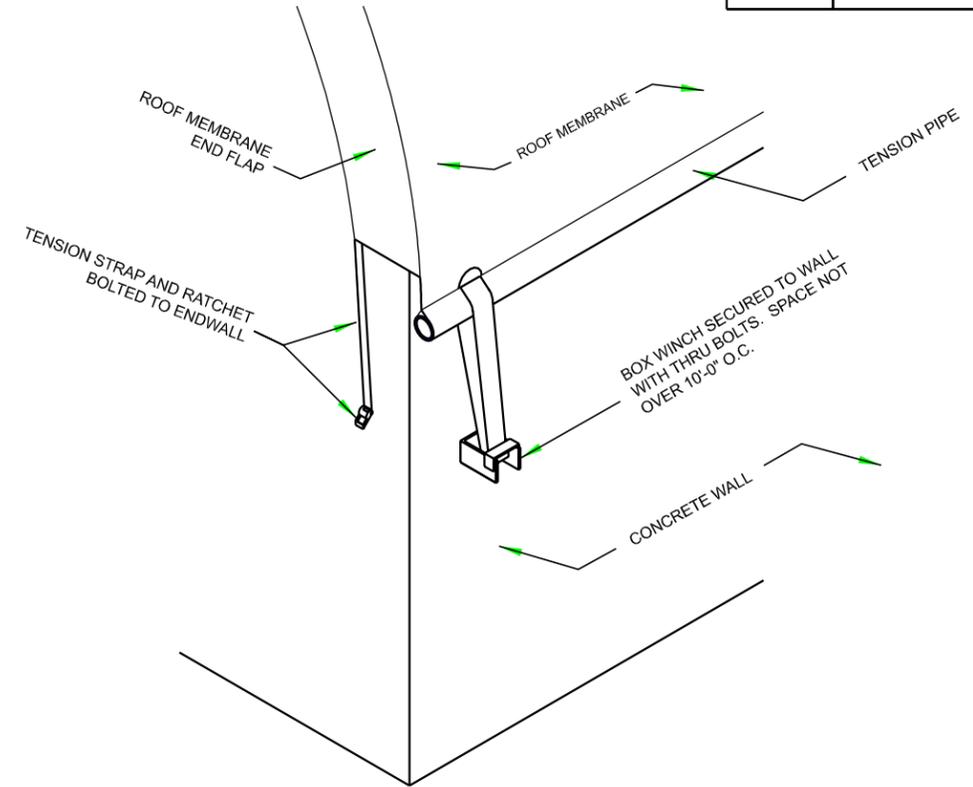
Brookings

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	0009-171	5	5



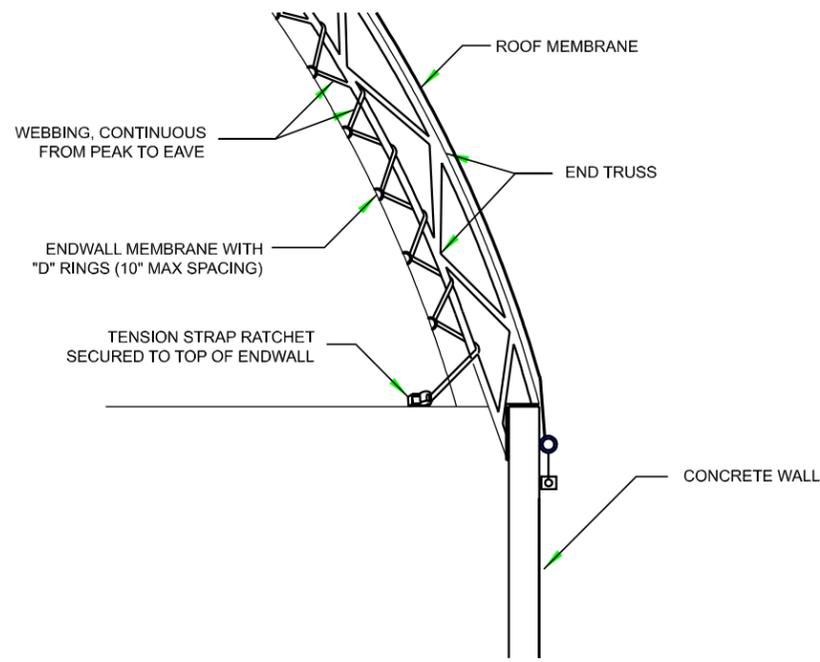
ROOF WINCH DETAIL

SCALE: NONE



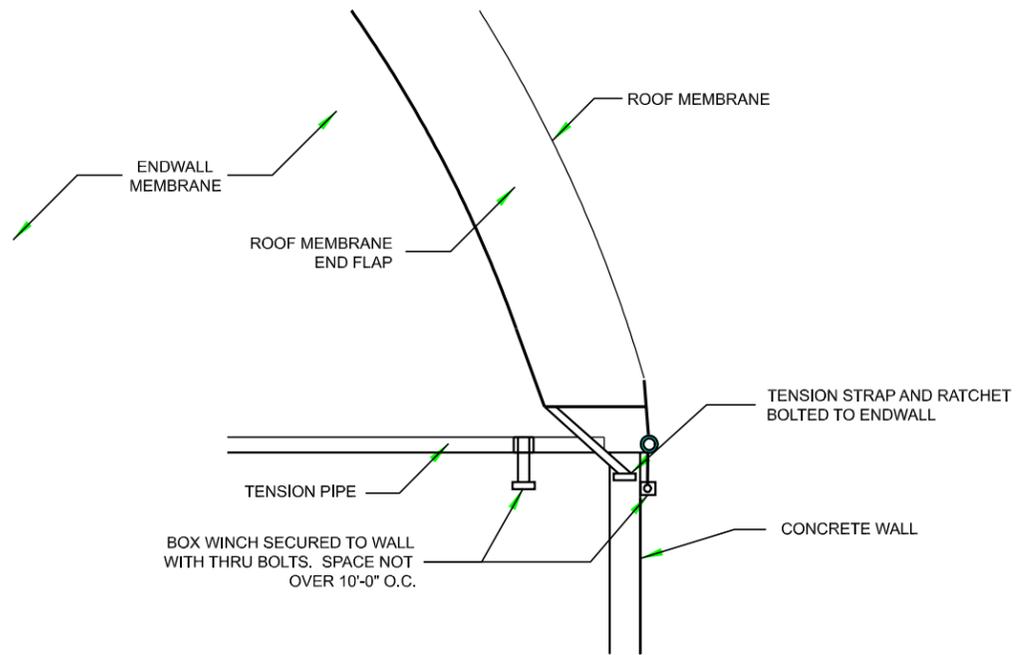
ENDWALL FLAP/RATCHET DETAIL

SCALE: NONE



ENDWALL WEBBING (INSIDE VIEW)

SCALE: NONE



ENDWALL MEMBRANE (OUTSIDE VIEW)

SCALE: NONE

